

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-250378

(43)Date of publication of application : 17.09.1999

(51)Int.Cl. G08B 25/10
H04B 1/034
H04Q 7/38
H04M 11/04

(21)Application number : 10-062014

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(22)Date of filing : 27.02.1998

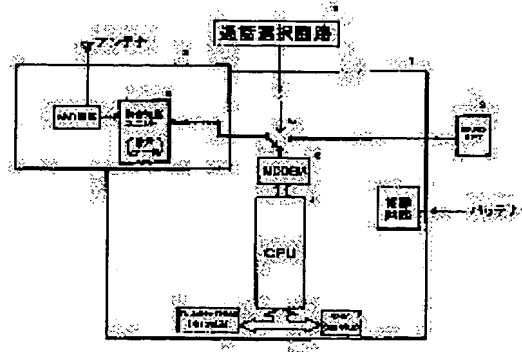
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(54) ACCIDENT EMERGENCY NOTIFING DEVICE WITH EXTERNAL DEVICE
COMMUNICATION FUNCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To enable sound talk and data communication at the time of an emergency by using an accident emergency notifying device.

SOLUTION: The accident emergency notification device 1 is equipped with a radio 2 for notifying a center of accident data or the like at the time of emergency of a vehicle. A changeover switch 5 for manually connecting a hand set 3 to a portable telephone set 8 so as to enable the sound talk by the hand set 3 by utilizing the radio 2 included in the accident emergency notification device 1 at the time of non-emergency. A microphone and a speaker for hands free talk can be used instead of the hand set 3. Or, similarly, a personal computer can be connected



so as to enable data communication. If an accident occurs when the sound talk by the hand set 3 is being performed, the sound talk is discontinued, a center is automatically connected to and the changeover switch 5 is switched so as to transmit accident information and the like. Thus constructed, the radio 2 of the accident emergency notification device 1 can be used as the telephone set at a normal time. Or, the radio 2 of the accident emergency notifying device 1 can also be used for the data communication that uses the personal computer at the normal time.

LEGAL STATUS

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|---|------------|
| [Date of request for examination] | 02.12.1999 |
| [Date of sending the examiner's decision of rejection] | |
| [Kind of final disposal of application other than the examiner's decision of rejection or application converted registration] | |
| [Date of final disposal for application] | |
| [Patent number] | 3126695 |
| [Date of registration] | 02.11.2000 |
| [Number of appeal against examiner's decision of rejection] | |
| [Date of requesting appeal against examiner's decision of rejection] | |
| [Date of extinction of right] | |

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(19)日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平11-250378

(43)公開日 平成11年(1999) 9月17日

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|--------------------------|------|---------------|---------|
| (51)Int.Cl. ⁸ | 識別記号 | F I | |
| G 0 8 B 25/10 | | G 0 8 B 25/10 | A |
| | | | D |
| H 0 4 B 1/034 | | H 0 4 B 1/034 | L |
| H 0 4 Q 7/38 | | H 0 4 M 11/04 | |
| H 0 4 M 11/04 | | H 0 4 B 7/26 | 1 0 9 G |

審査請求 未請求 請求項の数 2 F D (全 6 頁) 最終頁に続く

(21)出願番号 特願平10-62014

(22)出願日 平成10年(1998) 2月27日

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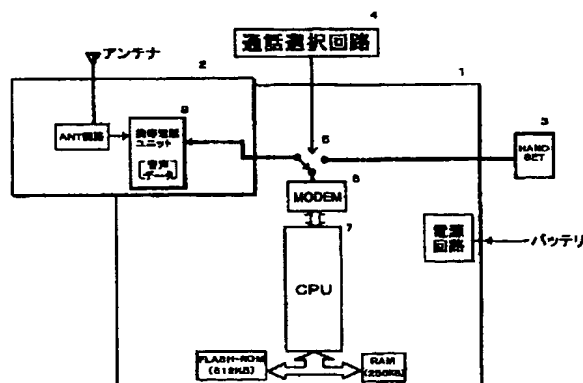
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(54)【発明の名称】 外部装置通信機能付き事故緊急通報装置

(57)【要約】

【課題】 事故緊急通報装置を利用して、非緊急時に音声通話およびデータ通信を行なえるようにする。

【解決手段】 事故緊急通報装置1には、車両の緊急時に事故データなどをセンターに通報するための無線機2が備えられている。事故緊急通報装置1に含まれる無線機2を非緊急時に使用して、ハンドセット3による音声通話を行なえるように、手動でハンドセット3を携帯電話機8に接続する切換スイッチ5を設ける。ハンドセット3の代わりにハンズフリー通話用のマイクとスピーカを使用してもよい。あるいは、同様にしてパーソナルコンピュータを接続してデータ通信を行なえるようにしてもよい。ハンドセット3による音声通話を行なっているときに事故が発生したら音声通話を打ち切って、自動的にセンターに接続して事故情報などを送信するように切換スイッチ5を切り換える。このように構成したので、事故緊急通報装置1の無線機2を通常時に電話として利用できる。あるいは、事故緊急通報装置1の無線機2を通常時にパソコンを使ったデータ通信に利用することもできる。



【特許請求の範囲】

【請求項1】 車両の衝突などの緊急事態を検出して無線機によりセンターに緊急情報を通報する事故緊急通報装置において、前記無線機をハンドセットに接続する通話選択手段を設け、前記無線機による音声通話を可能にしたことを特徴とする外部装置通信機能付き事故緊急通報装置。

【請求項2】 車両の衝突などの緊急事態を検出して無線機によりセンターに緊急情報を通報する事故緊急通報装置において、前記無線機をパーソナルコンピュータに接続するデータ通信選択手段を設け、前記無線機によるデータ通信を可能にしたことを特徴とする外部装置通信機能付き事故緊急通報装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、外部装置通信機能付き事故緊急通報装置に関し、特に、事故緊急通報装置の無線機で非緊急時に音声通話やデータ通信を行なうことができる外部装置通信機能付き事故緊急通報装置に関する。

【0002】

【従来の技術】車両緊急情報通報システムは、車両の衝突などの事故発生時に、車両に搭載した車両緊急情報通報装置から無線回線を介して、自動でサービスセンターへ車両緊急情報を通報するシステムである。このシステムにより、救急車やパトカーなどの緊急車両が現場へ到着するまでの時間を短縮し、けが人をより迅速に救出、救済することができる。また、急病人発生などの緊急事態でも、車両緊急情報通報装置の救急ボタンを押下することにより、無線回線を介して車両緊急情報がセンターに通報され、センターのサービス要員との会話を行なうことができる。

【0003】車両緊急情報通報システムにおけるサービスには、事故発生時の自動通報と、緊急時の手動通報と、ロードサイドサービスの手動通報がある。事故発生時の自動通報は、車両の衝突や事故発生時、自動でサービスセンターへ通報し、さらに引き続いて緊急サービスセンターへ通報するものである。緊急時の手動通報は、急病人発生などの緊急時、緊急通報ボタンを押すとサービスセンターへ通報し、さらに引き続いて緊急サービスセンターへ通報するものである。ロードサイドサービスの手動通報は、バンクなどの故障で困った時、ロードサービス要求ボタンを押すとロードサービスセンターへ通報するものである。

【0004】従来の車両緊急情報システムにおける事故緊急通報装置（以下、車両装置という）は、図3に示すように、携帯電話機8を利用して、車両の衝突時の情報を自動的にセンターに通報するものである。CPU7は、図示していないセンサーなどの信号を監視しており、衝突などの事故発生を検出すると、モデム6を介し

て無線機2により、自動的に車両の事故状況データをセンターに送信する。データ送信が終了すると、切換スイッチ5をハンドセット3に切り換えて、車両の乗員とセンターの要員の間で音声通話ができるようにする。車両装置の有する主な機能の概要を以下（1）～（6）に示す。

（1）通信機能（サービスセンターとの通信）：携帯電話機を用い、携帯電話の通話可能地域であれば通信可能である。9600bpsのデータ通信と音声通話が可能である。データ通信と音声通話を自動的に切り換える。

（2）位置検出機能（自車両の位置検出）：GPSにより位置検出を行なう。ジャイロを持ち、GPSの使用できないトンネルなどでも、位置を記録できる。車速センサーやリバースやブレーキの使用状態を記録する。

（3）緊急検出機能（自車両の緊急検出）：衝突検出装置センサーと横転センサーを持ち、どのような事故が発生したかを検出する。

（4）車両緊急情報通報機能（サービスセンターへの緊急通報）：衝突検出装置センサーと横転センサーの検知による自動通報を行なう。車両緊急情報通報ボタンの押下による手動通報もできる。

（5）ロードサイドサービス機能（サービスセンターへ支援呼び出し）：ロードサービス要求ボタンの押下による手動通報による。

【0005】緊急事態における車両装置1とセンターとの通信は、図4に示すような手順で行なわれる。車両装置1が緊急事態を検出すると、携帯電話機8により自動的に発信して、センター11とデータ通信を行なう。このデータ通信は、車両の位置や衝突状況などをセンター11に送信するものである。データ通信が終了するとセンター11から応答が返るので、切換スイッチ5を音声通話に切り換える。音声通話により、ケガの状態などをセンター11のサービス要員に伝えることができる。その後、センター11は、警察や消防や道路サービス組織などの公的救援機関12にデータを送信する。また、必要に応じて、音声でも伝える。その後、車両の乗員と警察などとの間で直接音声通話を行なうこともできる。

【0006】このように、車両装置1の携帯電話機8は緊急時のデータ通信とその後の通話専用で設けられており、通常時の通話に利用できるようにはなっていない。

【0007】

【発明が解決しようとする課題】従来の事故緊急通報装置では、通常時に音声通話を行うことができなかったために、通常通話用の携帯電話機をもう1台用意しなければならなかった。また、パソコンなどによりデータ通信を行なうためにも、別途携帯電話機を用意しなければならなかった。

【0008】本発明は、上記従来の問題点を解決し、通常時に音声通話やデータ通信ができる事故緊急通報装置を提供することを目的とする。

【0009】

【課題を解決するための手段】本発明では、上記課題を解決するために、事故緊急通報装置に、事故緊急通報装置に含まれる無線機をハンドセットまたはパーソナルコンピュータに接続する選択手段を設け、無線機を使用してハンドセットによる音声通話またはパーソナルコンピュータ接続によるデータ通信を行なう構成とした。

【0010】このように構成したことにより、事故緊急通報装置の1台の携帯電話機を通常時には音声通話やデータ通信に利用でき、緊急時には自動的に緊急情報の通報を行なうようにできる。

【0011】

【発明の実施の形態】本発明の請求項1に記載した発明は、車両の衝突などの緊急事態を検出して無線機によりセンターに緊急情報を通報する事故緊急通報装置において、前記無線機をハンドセットに接続する通話選択手段を設け、前記無線機による音声通話を行なうようにした外部装置通信機能付き事故緊急通報装置であり、通常時に音声通話を可能にするという作用を有する。

【0012】本発明の請求項2に記載した発明は、車両の衝突などの緊急事態を検出して無線機によりセンターに緊急情報を通報する事故緊急通報装置において、前記無線機をパーソナルコンピュータに接続するデータ通信選択手段を設け、前記無線機によるデータ通信を行なうようにした外部装置通信機能付き事故緊急通報装置であり、通常時にデータ通信を可能にするという作用を有する。

【0013】以下、本発明の実施の形態について、図1と図2を参照しながら詳細に説明する。

【0014】（第1の実施の形態）本発明の第1の実施の形態は、事故緊急通報装置の携帯電話機を使用して通常時に音声通話を行なう事故緊急通報装置である。

【0015】図1は、本発明の第1の実施の形態の外部装置通信機能付き事故緊急通報装置のブロック図である。図1において、車両装置1は、車両の衝突などの緊急事態発生時に緊急情報をセンターに自動通報する事故緊急通報装置である。無線機2は、携帯電話機8とアンテナ回路からなる装置である。携帯電話機8は、センターと通信するための電話機である。ハンドセット3は、音声通話のためのものである。通話選択回路4は、携帯電話機8を手動でハンドセット3に接続するための選択回路である。

【0016】車両の緊急事態発生時に、車両の緊急事態情報をセンターに送信する機能は従来の車両装置と同じである。携帯電話機8は、通常使用されている携帯電話機をほとんどそのまま使用したものであり、ハンドセット3を接続することにより、そのまま普通の携帯電話機として使用することができる。通常時に電話を使うときは、通話選択回路4で、切換スイッチ5をハンドセット側に切り換えることにより、ハンドセット3を選択して

通話を行なう。マイクと専用スピーカにより、ハンズフリー通話ができるようにしてもよい。通常の音声会話を行なっている際に事故が発生した場合は、自動的に音声通話を打ち切り、センターに事故情報を送信するように切り換える。

【0017】事故が発生した場合には、自動的にセンターに接続されるが、センターがビジーなどの理由で接続できない場合がある。そのような場合にも、普通の電話として使用できるので、警察や消防や病院などに手動で電話して、救援を求めることができる。

【0018】上記のように、本発明の第1の実施の形態では、事故緊急通報装置の携帯電話機を使用して音声通話を行なう構成としたので、通常時に普通の携帯電話として利用できる。

【0019】（第2の実施の形態）本発明の第2の実施の形態は、事故緊急通報装置の携帯電話機を使用してデータ通信を行なう事故緊急通報装置である。

【0020】図2は、本発明の第2の実施の形態の外部装置通信機能付き事故緊急通報装置のブロック図である。図2において、車両装置1は、車両の衝突などの緊急事態発生時に緊急情報をセンターに自動通報する事故緊急通報装置である。無線機2は、携帯電話機8とアンテナ回路からなる装置である。携帯電話機8は、センターと通信するための電話機である。パーソナルコンピュータ9は、デジタル通信機能を有するデータ処理装置である。データ通信選択回路10は、携帯電話機8を手動でパーソナルコンピュータ9に接続するための選択回路である。

【0021】車両の緊急事態発生時に、車両の緊急事態情報をセンターに送信する機能は従来の車両装置と同じである。通常時にデータ通信を行ないたい時は、データ通信選択回路10で切換スイッチ5をパーソナルコンピュータ側に切り換えることにより、パーソナルコンピュータ9を選択して、携帯電話機8をパーソナルコンピュータ9に接続して、データ通信を行なう。

【0022】データ通信時に緊急事態が発生した場合に、自動的に緊急通報に切り換えることは、第1の実施の形態と同じである。しかし、緊急時にデータ通信が終了して音声通話に切り換える際に、ハンドセットを備えていないと音声通話はできない。通常時にデジタル通信を行なうように構成する場合には、緊急時に音声通話ができるように、第1、2の実施の形態を組み合わせ、ハンドセットとパーソナルコンピュータのいずれかに切り換える選択回路を用いて、緊急時に音声通話ができるようにすればよい。

【0023】上記のように、本発明の第2の実施の形態では、事故緊急通報装置の携帯電話機を使用してデータ通信を行なう構成としたので、通常時にパソコンを使ったデータ通信が利用できる。

【0024】

【発明の効果】以上のように、本発明では、事故緊急通報装置の無線機を使用して通常時の音声通話を行なう構成としたので、事故緊急通報装置の無線機を通常時に電話として利用できるという効果が得られる。

【0025】また、事故緊急通報装置の無線機を使用して通常時のデータ通信を行なう構成としたので、事故緊急通報装置の無線機を通常時にパソコンを使ったデータ通信に利用できるという効果が得られる。

【図面の簡単な説明】

【図1】本発明の第1の実施の形態の通話機能付き事故緊急通報装置のブロック図、

【図2】本発明の第2の実施の形態のデータ通信機能付き事故緊急通報装置のブロック図、

【図3】従来の事故緊急通報装置のブロック図、

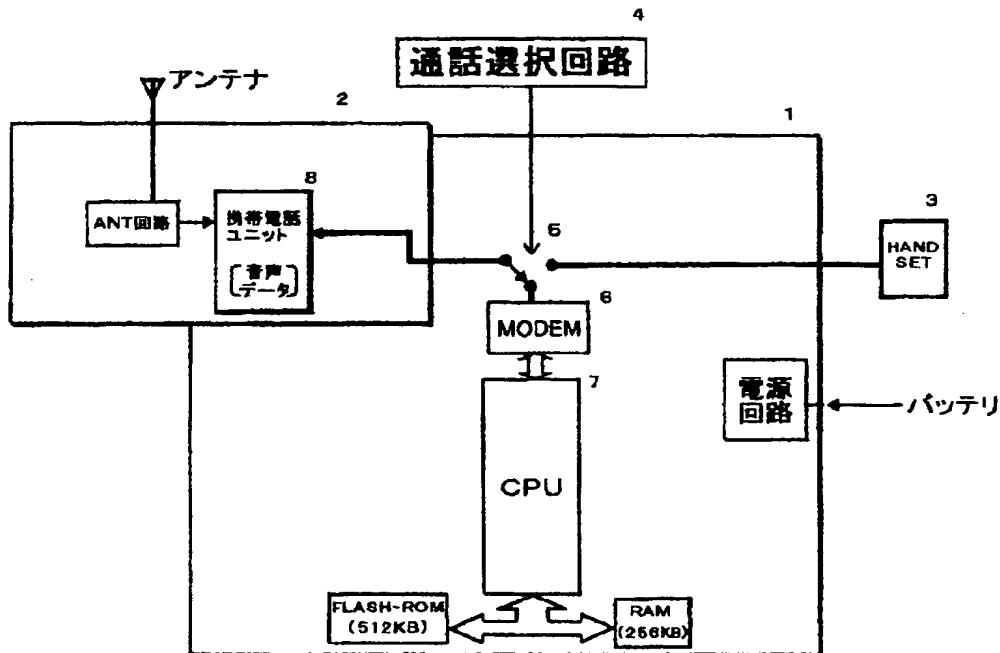
【図4】従来の事故緊急通報装置の通信手順を示す図で*

*ある。

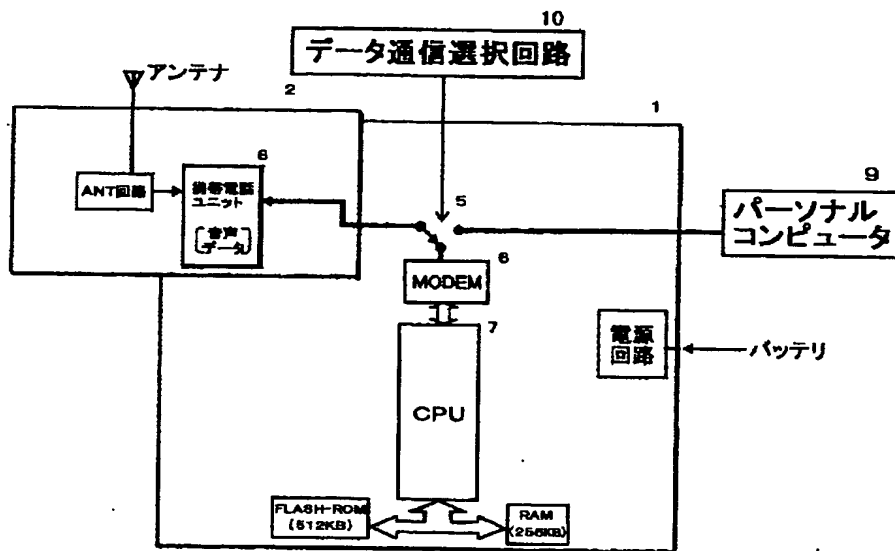
【符号の説明】

- 1 車両装置
- 2 無線機
- 3 ハンドセット
- 4 通話選択回路
- 5 切換スイッチ
- 6 モデム
- 7 CPU
- 8 携帯電話ユニット
- 9 パーソナルコンピュータ
- 10 データ通信選択回路
- 11 車両救援サービスセンター
- 12 公的救援機関

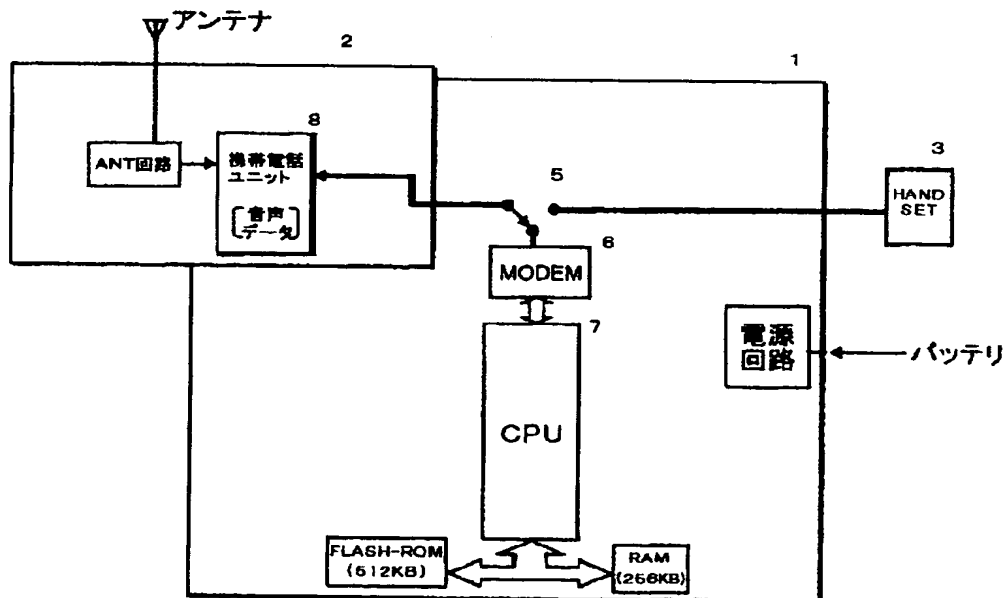
【図1】



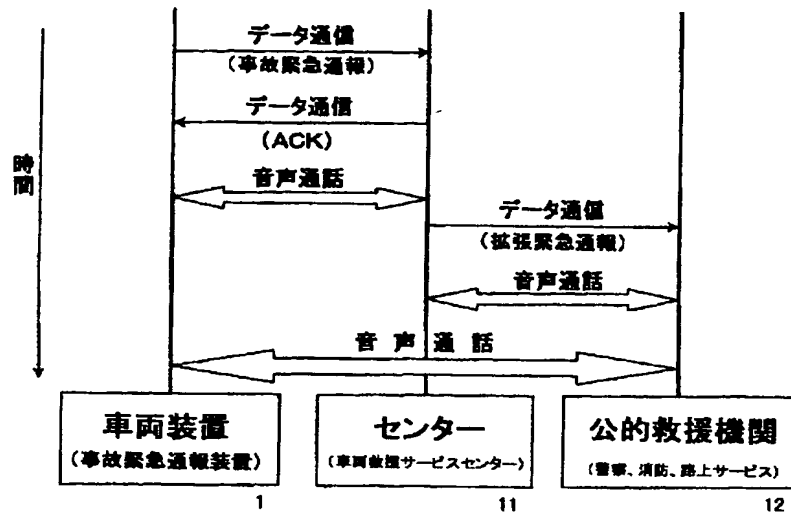
【図2】



【図3】



【図4】



フロントページの続き

(51)Int.Cl.⁶

識別記号

F I

H 0 4 B 7/26

1 0 9 M

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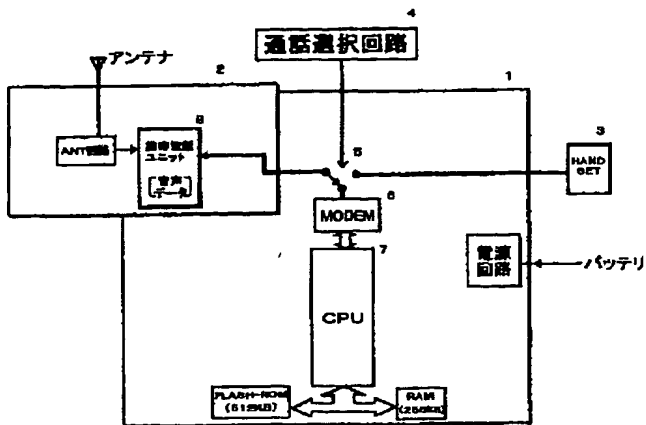
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CLAIMS

[Claim(s)]

[Claim 1] The accident emergency call unit with external device communication facility characterized by having established a telephone call selection means to connect the aforementioned walkie-talkie to a hand set, in the accident emergency call unit which detects emergencies, such as a collision of vehicles, and notifies emergency intelligence to a pin center, large with a walkie-talkie, and enabling the voice telephone call by the aforementioned walkie-talkie.

Drawing selection [Representative drawing]



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] Especially this invention relates to the accident emergency call unit with external device communication facility which can perform voice telephone call and data communication with the walkie-talkie of an accident emergency call unit in non-emergency about an accident emergency call unit with external device communication facility.

[0002]

[Description of the Prior Art] A vehicles emergency intelligence report system is a system which is automatic and notifies vehicles emergency intelligence to a service pin center,large through the vehicles emergency intelligence report equipment carried in vehicles at the time of the occurrence of accident of the collision of vehicles etc. to a radio circuit. By this system, time until urgent vehicles, such as an ambulance and a police car, arrive to a site can be shortened, and a wounded person can be rescued and relieved more quickly. Moreover, by carrying out the depression of the emergency button of vehicles emergency intelligence report equipment, through a radio circuit, vehicles emergency intelligence is notified to a pin center,large, and emergencies, such as emergency case generating, can also hold conversation with the service staff of a pin center,large.

[0003] Service in a vehicles emergency intelligence report system has the automatic report at the time of the occurrence of accident, the manual report in emergency, and the manual report of load side service. At the time of a collision and the occurrence of accident of vehicles, the automatic report at the time of the occurrence of accident is automatic, is notified to a service pin center,large, and is notified to an urgent service pin center,large further succeedingly. If emergency, such as emergency case generating, and an emergency call button are pushed, the manual report in emergency will be notified to a service pin center,large, and will be notified to an urgent service pin center,large further succeedingly. When troubled by failure of a blowout etc., the manual report of load side service will be notified to a load service pin center,large, if a load service request button is pushed.

[0004] The accident emergency call unit (henceforth vehicles equipment) in the conventional vehicles emergency intelligence system notifies the information at

the time of the collision of vehicles to a pin center,large automatically using a portable telephone 8, as shown in drawing 3 . If CPU7 is supervising the signal of the sensor which is not illustrated and the occurrence of accident of a collision etc. is detected, it will transmit the accident situation data of vehicles to a pin center,large automatically with a walkie-talkie 2 through a modem 6. After data transmission is completed, a change-over switch 5 is switched to a hand set 3, and it can be made to perform a voice telephone call between the crew of vehicles, and the staff of a pin center,large. The outline of the main functions which vehicles equipment has is shown in (1) - (6) below.

(1) Communication facility (communication with a service pin center,large) : using a portable telephone, if it is the area of a cellular phone which can be talked over the telephone, it can communicate. 9600bps data communication and a voice telephone call are possible. Data communication and a voice telephone call are switched automatically.

(2) Position detection function (position detection of self-vehicles) : GPS performs position detection. It has a gyroscope and a position can be recorded also in the tunnel which cannot use GPS. The busy condition of a vehicle speed sensor, reverse, or a brake is recorded.

(3) Urgent detection function (urgent detection of self-vehicles) : it has a collision-detection equipment sensor and a sideslip sensor, and detect what accident occurred.

(4) Vehicles emergency intelligence report function (emergency call in the service pin center,large) : perform the automatic report by detection of a collision-detection equipment sensor and a sideslip sensor. The manual report by the depression of a vehicles emergency intelligence report button can also be performed.

(5) Load side service function (it is a support call to a service pin center,large) : it is based on the manual report by the depression of a load service request button. [0005] Communication with the vehicles equipment 1 and the pin center,large in emergency is performed by the procedure as shown in drawing 4 . If vehicles equipment 1 detects emergency, it will send automatically by the portable telephone 8, and a pin center,large 11 and data communication will be performed. This data communication transmits a position, a collision situation, etc. of vehicles to a pin center,large 11. Since a response returns from a pin center,large 11 after data communication is completed, a change-over switch 5 is switched to a voice telephone call. The state of an injury etc. can be told to the service staff of a pin center,large 11 by voice telephone call. Then, a pin center,large 11 transmits data to the public relief engines 12, such as the police, fire fighting, and a passage service organization. Moreover, it tells also with voice if needed. Then, a direct-sound voice telephone call can also be performed between the crew of vehicles, the police, etc.

[0006] Thus, the portable telephone 8 of vehicles equipment 1 is only formed [of the data communication in emergency, and after that] in telephone calls, and can usually be applicable now to the telephone call at the time.

[0007]

[Problem(s) to be Solved by the Invention] In the conventional accident

emergency call unit, since a voice telephone call was not usually sometimes able to be carried out, one more portable telephone for a telephone call usually had to be prepared. Moreover, in order for a personal computer etc. to perform data communication, the portable telephone had to be prepared separately.

[0008] this invention solves the above-mentioned conventional trouble, and aims at offering the accident emergency call unit which can usually sometimes perform voice telephone call and data communication.

[0009]

[Means for Solving the Problem] In this invention, in order to solve the above-mentioned technical problem, a selection means to connect to a hand set or a personal computer the walkie-talkie contained in an accident emergency call unit at an accident emergency call unit was established, and it considered as the composition which performs data communication by the voice telephone call by the hand set, or personal computer connection using a walkie-talkie.

[0010] Thus, by having constituted, sometimes one set of the portable telephone of an accident emergency call unit can usually be used at a voice telephone call or data communication, and emergency intelligence can be automatically notified to emergency.

[0011]

[Embodiments of the Invention] In the accident emergency call unit which detects emergencies, such as a collision of vehicles, and notifies emergency intelligence to a pin center, large with a walkie-talkie, invention indicated to the claim 1 of this invention establishes a telephone call selection means to connect the aforementioned walkie-talkie to a hand set, is the accident emergency call unit with external device communication facility which was made to perform the voice telephone call by the aforementioned walkie-talkie, and has operation of usually sometimes enabling a voice telephone call.

[0012] In the accident emergency call unit which detects emergencies, such as a collision of vehicles, and notifies emergency intelligence to a pin center, large with a walkie-talkie, invention indicated to the claim 2 of this invention establishes a data communication selection means to connect the aforementioned walkie-talkie to a personal computer, is the accident emergency call unit with external device communication facility which was made to perform data communication by the aforementioned walkie-talkie, and has operation of usually sometimes making data communication possible.

[0013] Hereafter, the gestalt of operation of this invention is explained in detail, referring to drawing 1 and drawing 2.

[0014] (Gestalt of the 1st operation) The gestalt of operation of the 1st of this invention is an accident emergency call unit which usually sometimes performs a voice telephone call using the portable telephone of an accident emergency call unit.

[0015] Drawing 1 is the block diagram of the accident emergency call unit with external device communication facility of the gestalt of operation of the 1st of this invention. In drawing 1, vehicles equipment 1 is an accident emergency call unit which notifies emergency intelligence to a pin center, large automatically at the time of emergency generating of a collision of vehicles etc. A walkie-talkie 2 is

equipment which consists of a portable telephone 8 and an antenna circuit. A portable telephone 8 is telephone for communicating with a pin center,large. A hand set 3 is a thing for a voice telephone call. The telephone call selection circuitry 4 is a selection circuitry for connecting a portable telephone 8 to a hand set 3 manually.

[0016] The function to transmit the emergency information on vehicles to a pin center,large at the time of emergency generating of vehicles is the same as conventional vehicles equipment. A portable telephone 8 can be used as an ordinary portable telephone as it is by using the portable telephone usually used almost as it is, and connecting a hand set 3. Usually, when sometimes using a telephone, it is the telephone call selection circuitry 4, and talks over the telephone by choosing a hand set 3 by switching a change-over switch 5 to a hand-set side. It is made to perform a handsfree telephone call by the microphone and the exclusive loudspeaker. When holding the usual voice conversation and accident occurs, a voice telephone call is closed automatically, and it switches so that accident information may be transmitted to a pin center,large.

[0017] Although it connects with a pin center,large automatically when accident occurs, a pin center,large may be unable to connect by which busy reason. Also in such a case, since it can be used as an ordinary telephone, the police, fire fighting, a hospital, etc. can be telephoned manually and it can ask for relief.

[0018] As mentioned above, with the gestalt of operation of the 1st of this invention, since it considered as the composition which performs a voice telephone call using the portable telephone of an accident emergency call unit, it can usually sometimes use as an ordinary cellular phone.

[0019] (Gestalt of the 2nd operation) The gestalt of operation of the 2nd of this invention is an accident emergency call unit which performs data communication using the portable telephone of an accident emergency call unit.

[0020] Drawing 2 is the block diagram of the accident emergency call unit with external device communication facility of the gestalt of operation of the 2nd of this invention. In drawing 2, vehicles equipment 1 is an accident emergency call unit which notifies emergency intelligence to a pin center,large automatically at the time of emergency generating of a collision of vehicles etc. A walkie-talkie 2 is equipment which consists of a portable telephone 8 and an antenna circuit. A portable telephone 8 is telephone for communicating with a pin center,large. A personal computer 9 is a data processor which has a digital-communications function. The data communication selection circuitry 10 is a selection circuitry for connecting a portable telephone 8 to a personal computer 9 manually.

[0021] The function to transmit the emergency information on vehicles to a pin center,large at the time of emergency generating of vehicles is the same as conventional vehicles equipment. Usually, by switching a change-over switch 5 to a personal computer side by the data communication selection circuitry 10, a personal computer 9 is chosen, a portable telephone 8 is connected to a personal computer 9 and data communication is performed to sometimes perform data communication.

[0022] When emergency occurs at the time of data communication, switching to an emergency call automatically is the same as the gestalt of the 1st operation.

However, in case data communication is completed in emergency and it switches to a voice telephone call, unless it has the hand set, a voice telephone call cannot be performed. Usually, it is made just to perform a voice telephone call in emergency, when it constitutes so that digital communications may sometimes be performed using the selection circuitry switched to a hand set or a personal computer combining the gestalt of the 1st and operation of two so that a voice telephone call can be performed in emergency.

[0023] As mentioned above, with the gestalt of operation of the 2nd of this invention, since it considered as the composition which performs data communication using the portable telephone of an accident emergency call unit, the data communication using the personal computer can usually sometimes be used.

[0024]

[Effect of the Invention] As mentioned above, in this invention, since it considered as the composition which usually performs the voice telephone call at the time using the walkie-talkie of an accident emergency call unit, the effect that the walkie-talkie of an accident emergency call unit can usually sometimes be used as a telephone is acquired.

[0025] Moreover, since it considered as the composition which usually performs data communication at the time using the walkie-talkie of an accident emergency call unit, the effect that the walkie-talkie of an accident emergency call unit can usually sometimes be used at the data communication using the personal computer is acquired.

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TECHNICAL FIELD

[The technical field to which invention belongs] Especially this invention relates to the accident emergency call unit with external device communication facility which can perform voice telephone call and data communication with the walkie-talkie of an accident emergency call unit in non-emergency about an accident emergency call unit with external device communication facility.

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PRIOR ART

[Description of the Prior Art] A vehicles emergency intelligence report system is a system which is automatic and notifies vehicles emergency intelligence to a service pin center,large through the vehicles emergency intelligence report equipment carried in vehicles at the time of the occurrence of accident of the collision of vehicles etc. to a radio circuit. By this system, time until urgent vehicles, such as an ambulance and a police car, arrive to a site can be shortened, and a wounded person can be rescued and relieved more quickly. Moreover, by carrying out the depression of the emergency button of vehicles emergency intelligence report equipment, through a radio circuit, vehicles emergency intelligence is notified to a pin center,large, and emergencies, such as emergency case generating, can also hold conversation with the service staff of a pin center,large.

[0003] Service in a vehicles emergency intelligence report system has the automatic report at the time of the occurrence of accident, the manual report in emergency, and the manual report of load side service. At the time of a collision and the occurrence of accident of vehicles, the automatic report at the time of the occurrence of accident is automatic, is notified to a service pin center,large, and is notified to an urgent service pin center,large further succeedingly. If emergency, such as emergency case generating, and an emergency call button are pushed, the manual report in emergency will be notified to a service pin center,large, and will be notified to an urgent service pin center,large further succeedingly. When troubled by failure of a blowout etc., the manual report of load side service will be notified to a load service pin center,large, if a load service request button is pushed.

[0004] The accident emergency call unit (henceforth vehicles equipment) in the conventional vehicles emergency intelligence system notifies the information at the time of the collision of vehicles to a pin center,large automatically using a portable telephone 8, as shown in drawing 3 . If CPU7 is supervising the signal of the sensor which is not illustrated and the occurrence of accident of a collision etc. is detected, it will transmit the accident situation data of vehicles to a pin center,large automatically with a walkie-talkie 2 through a modem 6. After data transmission is completed, a change-over switch 5 is switched to a hand set 3, and it can be made to perform a voice telephone call between the crew of vehicles, and the staff of a pin center,large. The outline of the main functions which vehicles

equipment has is shown in (1) - (6) below.

(1) Communication facility (communication with a service pin center,large) : using a portable telephone, if it is the area of a cellular phone which can be talked over the telephone, it can communicate. 9600bps data communication and a voice telephone call are possible. Data communication and a voice telephone call are switched automatically.

(2) Position detection function (position detection of self-vehicles) : GPS performs position detection. It has a gyroscope and a position can be recorded also in the tunnel which cannot use GPS. The busy condition of a vehicle speed sensor, reverse, or a brake is recorded.

(3) Urgent detection function (urgent detection of self-vehicles) : it has a collision-detection equipment sensor and a sideslip sensor, and detect what accident occurred.

(4) Vehicles emergency intelligence report function (emergency call in the service pin center,large) : perform the automatic report by detection of a collision-detection equipment sensor and a sideslip sensor. The manual report by the depression of a vehicles emergency intelligence report button can also be performed.

(5) Load side service function (it is a support call to a service pin center,large) : it is based on the manual report by the depression of a load service request button. [0005] Communication with the vehicles equipment 1 and the pin center,large in emergency is performed by the procedure as shown in drawing 4 . If vehicles equipment 1 detects emergency, it will send automatically by the portable telephone 8, and a pin center,large 11 and data communication will be performed. This data communication transmits a position, a collision situation, etc. of vehicles to a pin center,large 11. Since a response returns from a pin center,large 11 after data communication is completed, a change-over switch 5 is switched to a voice telephone call. The state of an injury etc. can be told to the service staff of a pin center,large 11 by voice telephone call. Then, a pin center,large 11 transmits data to the public relief engines 12, such as the police, fire fighting, and a passage service organization. Moreover, it tells also with voice if needed. Then, a direct-sound voice telephone call can also be performed between the crew of vehicles, the police, etc.

[0006] Thus, the portable telephone 8 of vehicles equipment 1 is only formed [of the data communication in emergency, and after that] in telephone calls, and can usually be applicable now to the telephone call at the time.

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EFFECT OF THE INVENTION

[Effect of the Invention] As mentioned above, in this invention, since it is considered as the composition which usually performs the voice telephone call at the time using the walkie-talkie of an accident emergency call unit, the effect that the walkie-talkie of an accident emergency call unit can usually sometimes be used as a telephone is acquired.

[0025] Moreover, since it is considered as the composition which usually performs data communication at the time using the walkie-talkie of an accident emergency call unit, the effect that the walkie-talkie of an accident emergency call unit can usually sometimes be used at the data communication using the personal computer is acquired.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] In the conventional accident emergency call unit, since a voice telephone call was not usually sometimes able to be carried out, one more portable telephone for a telephone call usually had to be prepared. Moreover, in order for a personal computer etc. to perform data communication, the portable telephone had to be prepared separately.

[0008] this invention solves the above-mentioned conventional trouble, and aims at offering the accident emergency call unit which can usually sometimes perform voice telephone call and data communication.

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MEANS

[Means for Solving the Problem] In this invention, in order to solve the above-mentioned technical problem, a selection means to connect to a hand set or a personal computer the walkie-talkie contained in an accident emergency call unit at an accident emergency call unit was established, and it considered as the composition which performs data communication by the voice telephone call by the hand set, or personal computer connection using a walkie-talkie.

[0010] Thus, by having constituted, sometimes one set of the portable telephone of an accident emergency call unit can usually be used at a voice telephone call or data communication, and emergency intelligence can be automatically notified to emergency.

[0011]

[Embodiments of the Invention] In the accident emergency call unit which detects emergencies, such as a collision of vehicles, and notifies emergency intelligence to a pin center, large with a walkie-talkie, invention indicated to the claim 1 of this invention establishes a telephone call selection means to connect the aforementioned walkie-talkie to a hand set, is the accident emergency call unit with external device communication facility which was made to perform the voice telephone call by the aforementioned walkie-talkie, and has operation of usually sometimes enabling a voice telephone call.

[0012] In the accident emergency call unit which detects emergencies, such as a collision of vehicles, and notifies emergency intelligence to a pin center, large with a walkie-talkie, invention indicated to the claim 2 of this invention establishes a data communication selection means to connect the aforementioned walkie-talkie to a personal computer, is the accident emergency call unit with external device communication facility which was made to perform data communication by the aforementioned walkie-talkie, and has operation of usually sometimes making data communication possible.

[0013] Hereafter, the gestalt of operation of this invention is explained in detail, referring to drawing 1 and drawing 2.

[0014] (Gestalt of the 1st operation) The gestalt of operation of the 1st of this invention is an accident emergency call unit which usually sometimes performs a voice telephone call using the portable telephone of an accident emergency call unit.

[0015] Drawing 1 is the block diagram of the accident emergency call unit with

external device communication facility of the gestalt of operation of the 1st of this invention. In drawing 1 , vehicles equipment 1 is an accident emergency call unit which notifies emergency intelligence to a pin center,large automatically at the time of emergency generating of a collision of vehicles etc. A walkie-talkie 2 is equipment which consists of a portable telephone 8 and an antenna circuit. A portable telephone 8 is telephone for communicating with a pin center,large. A hand set 3 is a thing for a voice telephone call. The telephone call selection circuitry 4 is a selection circuitry for connecting a portable telephone 8 to a hand set 3 manually.

[0016] The function to transmit the emergency information on vehicles to a pin center,large at the time of emergency generating of vehicles is the same as conventional vehicles equipment. A portable telephone 8 can be used as an ordinary portable telephone as it is by using the portable telephone usually used almost as it is, and connecting a hand set 3. Usually, when sometimes using a telephone, it is the telephone call selection circuitry 4, and talks over the telephone by choosing a hand set 3 by switching a change-over switch 5 to a hand-set side. It is made to perform a handsfree telephone call by the microphone and the exclusive loudspeaker. When holding the usual voice conversation and accident occurs, a voice telephone call is closed automatically, and it switches so that accident information may be transmitted to a pin center,large.

[0017]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram of the accident emergency call unit with a telephone call function of the gestalt of operation of the 1st of this invention,

[Drawing 2] The block diagram of the accident emergency call unit with data communication facility of the gestalt of operation of the 2nd of this invention,

[Drawing 3] The block diagram of the conventional accident emergency call unit,

[Drawing 4] It is drawing showing the communication procedure of the conventional accident emergency call unit.

[Description of Notations]

1 Vehicles Equipment

2 Walkie-talkie

3 Hand Set

4 Telephone Call Selection Circuitry

5 Change-over Switch

6 Modem

7 CPU

8 Cellular-Phone Unit

9 Personal Computer

10 Data Communication Selection Circuitry

11 Vehicles Relief Service Pin Center,large

12 Public Relief Engine

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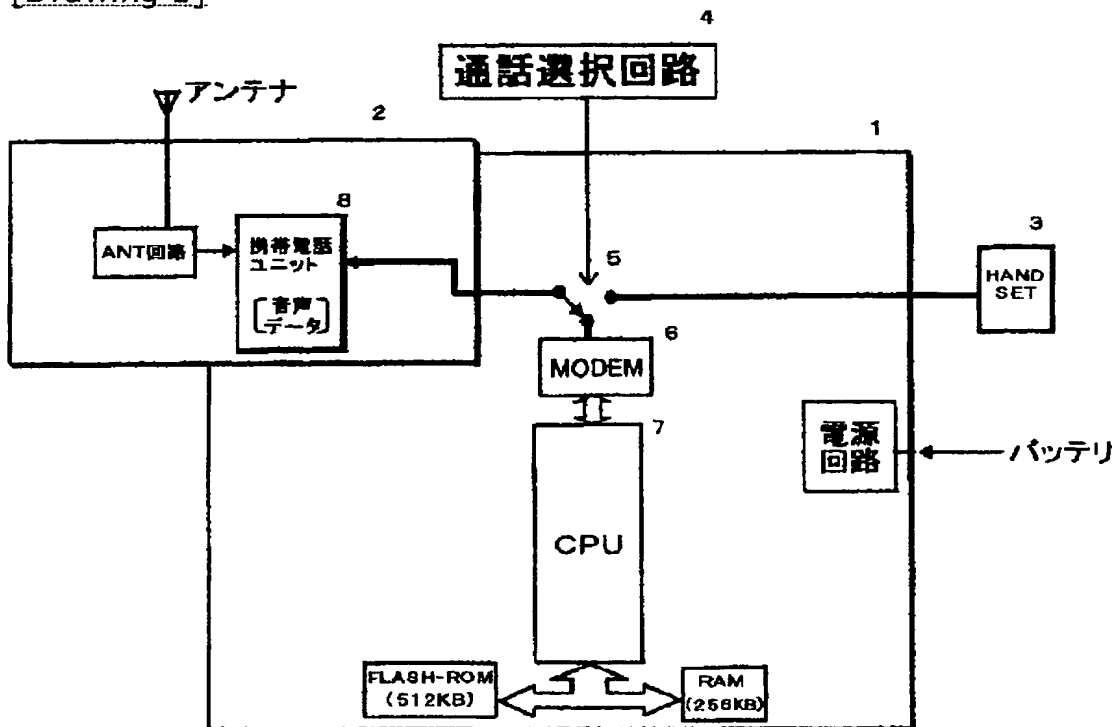
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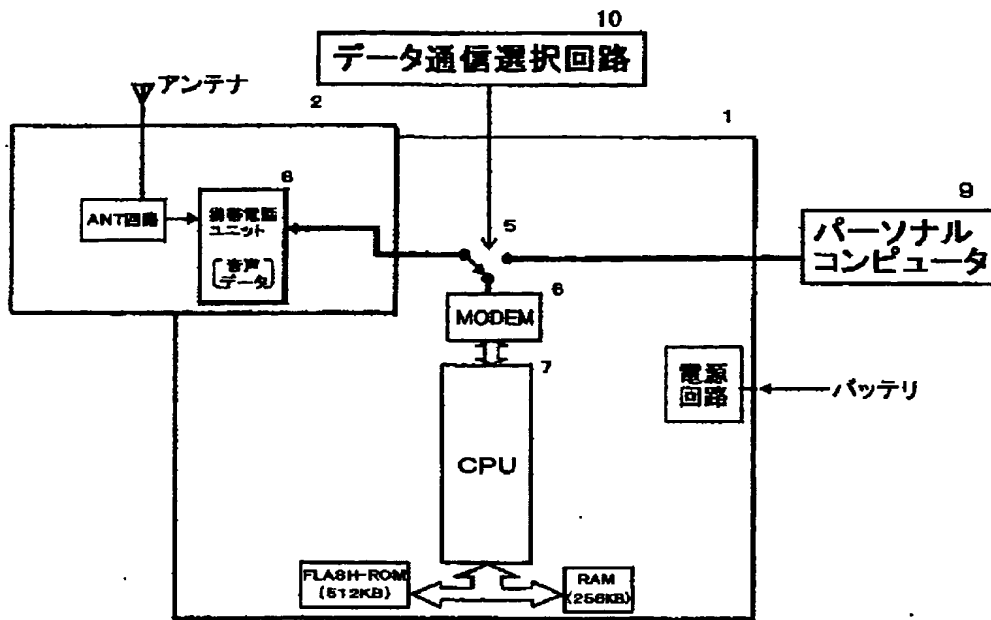
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DRAWINGS

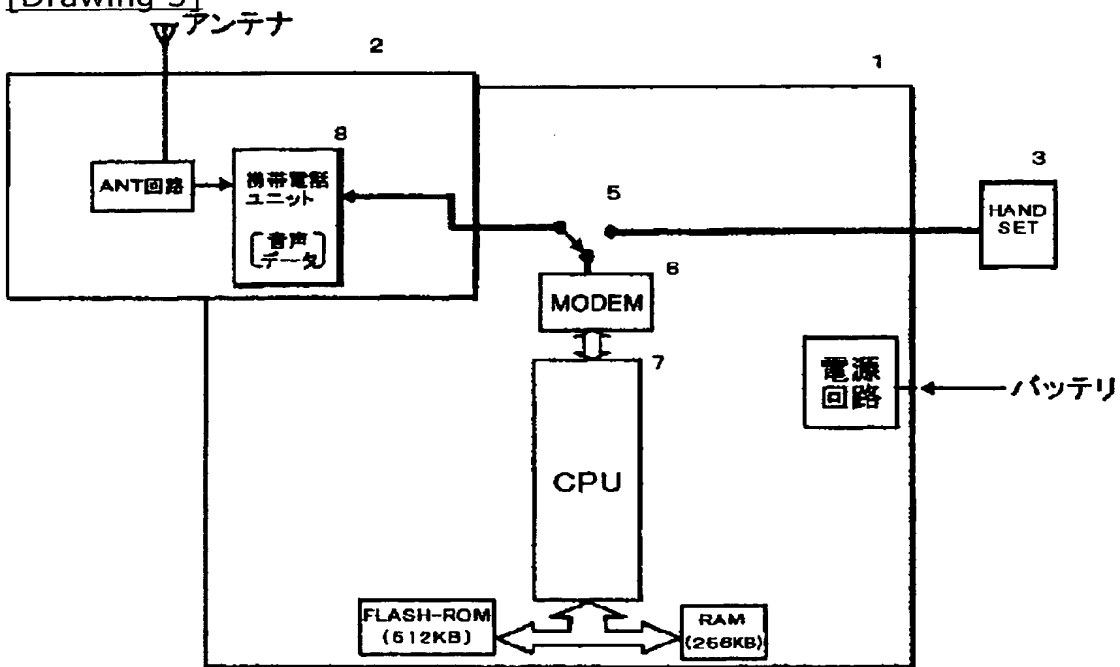
[Drawing 1]



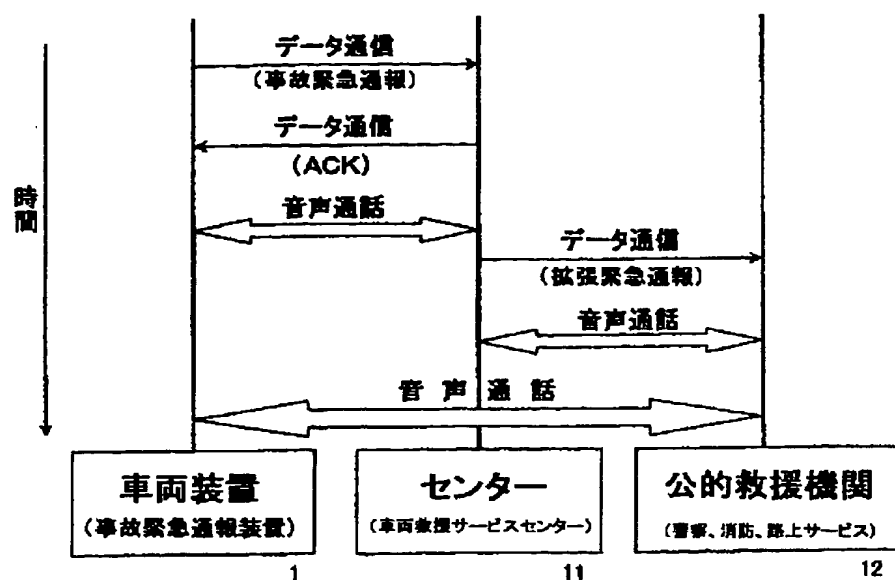
[Drawing 2]



[Drawing 3]



[Drawing 4]



[Translation done.]